

HEALTH

EDITED BY

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Notes by the Way

“Health is the foundation of all our physical happiness.”—Herder.

HANGING and public executions have, together, become both a public and scientific study. The ways and works of the new executioner in his ghastly business have formed the subject of a vast number of comments from the lay and medical press. Comparisons of the methods of Marwood with those of his successor have been frequent, and it would seem as though, for the time being, the proper conduct of executions was the leading topic of the day. The latest contribution to the subject is that of Dr. B. W. Richardson, who, in an article published in the *Lancet*, discusses the “Modes of Death in the Execution of English Criminals.” Dr. Richardson’s paper is a highly interesting one. It deals with the theme from a scientific standpoint, and it is needless to point out that the subject of “hanging,” apart from any morbid sentiment which may attach to it, is one involving a number of considerations highly interesting to the man of science, as well as important from a humanitarian point of view.

* * *

THE English law directs that the criminal “shall hang by the neck until dead.” Now, it is exactly this form of death by suffocation which, as usually administered, the last sentence of the law does not carry out. There is no doubt that in the vast majority of cases criminals have had their necks dislocated by the “long drop.” In such an event, the spinal cord (or great main nervous axis which is a continuation of the brain through the spine or backbone) is broken or severely injured. The accident, moreover, takes place at a part of the cord where it is specially susceptible of fatal injury—namely, near its top, or where it leaves the brain. Here the great nerves that exercise control over heart, lungs, &c., originate, and the criminal who perishes by death on the “long drop” dies—like the rabbit which a gamekeeper kills by a sharp stroke on the back of the neck—a sudden and threefold death. The heart’s action is arrested; breathing ceases; and swallowing is rendered impossible. But, all the same, the death is not one by “hanging,” pure and simple. It is death from fracture of spine and spinal cord.

DR. RICHARDSON points out that in the recent execution at Liverpool, where the pulse could be detected beating for eight minutes after the drop fell, death occurred from pure suffocation by “hanging.” In Calcraft’s time, this form of death was that commonly carried out. In nearly all forms of suffocation the heart continues to beat for some time after consciousness has entirely disappeared. Dr. Richardson, therefore, shows what physiology teaches—namely, that notwithstanding all the recent excitement regarding the Liverpool execution, death was painless, even if more gradual than where the spine is broken. In suffocation, the circulation of blood through the brain is impeded, the breathing ceases, and insensibility is thus produced. We have heard of a case in which a person committed suicide by merely resting his neck on a handkerchief he had suspended between two chairs. The pressure on the blood-vessels of the neck produced unconsciousness; and this gradually deepened as the weight of the body tended to greater compression of the vessels, and finally ended in obstruction of breathing and death. That the practice of “hanging” is, therefore, a humane form of death, is, as contended by Dr. Richardson, apparently proved. The “long drop,” he argues, entails a painful form of death, more especially as death is not invariably produced quickly or instantaneously by this process. The whole question is one of humanity, in the advocacy of which Science raises her voice in a powerful appeal to the powers that be, to see that if executions are still to form part of our system of legal punishments, they shall be carried out in the fashion least barbarous and most consistent with sure and speedy extinction of life. One thing is at least clear—the question of method should not be left for the decision of an ignorant executioner, but should be finally pronounced upon by a committee of scientific men, whose advice the Home Secretary should certainly obtain.

* * *

AN instructive item in the history of typhoid fever and its origin has just been communicated to the medical press by a medical man in practice in Cape Colony. He attributes sudden outbreaks of this fever, in cases where no history of infection was present, to the presence of cattle manure allowed to accumulate so as to infect the air. The changes which the manure undergoes may probably produce a certain condition favourable as a breeding-ground for the germs of the disease. The disease may thus arise independently of infection from a previous case or cases; but, once produced, is capable of being conveyed by the ordinary channels of infection to other human beings. The lesson to be learned from this observation is that of keeping milk, water, &c., free from all danger of contamination by cattle manure. Sheep manure, curiously enough, does not appear to possess the same relations as those presented by cattle manure to typhoid fever. The whole topic is evidently one for the careful thought and investigation of sanitarians. Meanwhile we find in the observations of Cape Colony a new argument for stringent cleanliness in our dairies. Many mysterious outbreaks of typhoid fever in dairies may possibly have had their origin in accumulated manure-heaps.

* * *

THE vegetarians have been recently flooding the *Lancet* with protests against the remark of our contemporary that abstinence from flesh foods generally “was not advisable.” In a sensible rejoinder, the *Lancet* points out that the question (as has more than once been shown in *HEALTH*) is one for wise personal experience; that while there are

many who may live healthily on a vegetable dietary, there are others to whom such a dietary would bring weakness and ill-health; and that whilst we hear continually of wonderful cases of cures of disease and of healthy-living brought about by the practice of vegetarianism, we never hear anything of the failures of that system. Perhaps there are no failures—but the supposition is improbable, unless vegetarianism is unlike every other human institution. We re-echo very heartily the *Lancet's* remark that this exhibition of bigotry on the part of vegetarians is much to be regretted. The "Food Reform Society" is a useful and admirable organisation. It teaches the people the possibility which exists of supporting life healthily on cheap and simple fare. But it loses all its influence when, neglecting the teachings of science, it converts its power into a means of special pleading of unwarranted kind. The vegetarians should not forget that if they are to follow Dame Nature throughout, they must take into account the fact that we begin life, and lay the foundation of our frames, not on a vegetable dietary, but on Nature's own food—the type of all foods—milk itself.

* * *

THE phrase "tears of blood" has often been quoted in a metaphorical sense; but it would now seem to be a well-proved fact that, in certain cases, blood may drop from the eyes in place of the tears. There would appear to be no eye-disease in these cases, any more than in the case of Louise Lateau, the Belgian "stigmatic," there was any disease of the skin where the bleeding marks of the so-called "crown of thorns" were seen in her case. The "bleeding tears" occur, as a rule, in nervous, hysterical young women; but we may readily see how, in such cases, the addition of a little religious mania or superstition would easily convert a physiological curiosity into a "modern miracle."

* * *

OUR instalment of Dr. Gibson's articles on "Cottage Hospitals" has this week been crowded out. We shall resume these interesting papers in our next issue.

* * *

A CURIOUS case of trance has lately terminated in Glasgow. The patient was a woman 35 years of age, and since June last she lay in a state of coma or trance, motionless, with closed eyes, a pulse of about 80 per minute, natural temperature, and normal breathing. Consciousness was entirely absent, until at the end of November she suddenly awoke, and is now recovering her wonted strength. She was daily watched during her long sleep in the Western Infirmary of Glasgow, having been fed daily by means of a stomach-tube. The case is a curious and well-nigh unique one, on account of its prolonged nature. These cases of trance are the puzzle of the physiologist, and under ordinary circumstances are liable to simulate death so closely that patients have occasionally been in danger of living burial.

* * *

THE danger of feeding infants upon biscuit-food was illustrated recently at Exeter, where the City Coroner called attention to several cases in which death had occurred through such a practice. It seems to be a hard task that of teaching mothers that milk is the only true food for infants under the age of six or eight months.

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Original Essays

"Life is not to live, but to be well."—*Martial*.

STORIES OF SCIENCE AND CRIME.

II.

ONE of the most curious and puzzling cases of identification, complicated by a similarity of name, is that of Caroline Walsh, related by Dr. Taylor in his "Medical Jurisprudence."

A woman named Elizabeth Ross was tried at the Old Bailey in December, 1831, for the murder of an Irishwoman named Caroline Walsh. Walsh had consented to live with her and her husband, and, on the evening of the 19th of August, 1831, the deceased went to the residence of Ross, in Goodman's Fields, taking with her as her belongings a bed and a basket. The latter contained the tapes and other odds and ends which Walsh was accustomed to sell by way of earning a scanty livelihood. All traces of Caroline Walsh vanished on the evening of the 19th of August. When Ross was interrogated respecting her visitor and lodger, she at first replied in an unsatisfactory fashion, but ultimately stated that Walsh had left her house on the 19th, and that nothing had been heard of her lodger since. It was proved, however, by the testimony of Ross's son, that his mother had suffocated Walsh on the evening of the 19th of August, and had disposed of her body for anatomical purposes.

A most singular element now appeared in the case. On the evening of the 20th of August an old woman, giving her name as Caroline Welsh, was found in the neighbourhood of Goodman's Fields in a state of squalor and filth, and was duly conveyed to the London Hospital. It was discovered that she had sustained a fracture of the hip, and after a few days' residence in hospital the patient died and was duly interred. At the trial it was argued that the Caroline Welsh of the London Hospital was in reality her late lodger, and hence it became important to settle the marvellous identity which had thus arisen between the missing lodger and the hospital patient. The former, as has been stated, was an Irishwoman, but so also was Caroline Walsh. It was found out, however, that Caroline Walsh came from Kilkenny, whilst the hospital patient hailed from Waterford.

This first point of difference was speedily followed by the discovery of other distinctions fatal to the prisoner's case. Caroline Walsh was described as being eighty-four years of age, tall, of a pale complexion, and had grey hair. Caroline Welsh, who died in hospital, was about sixty years of age; she was also tall, but was of dark complexion. Further, Caroline Walsh was cleanly in person, and exhibited no defect in physical conformation. Caroline Welsh was dirty and emaciated, and her feet were so covered with corns and bunions as to present the appearance of being deformed. In dress, however, the two women were very much alike; and, more curious still, both possessed baskets of similar make, that of Welsh having a cover, which the basket of Walsh wanted.

It may be said that, with the evidence as to the difference between the women in question, and with positive evidence as to the death of Walsh, little doubt could have existed as to the identity of each. But the confusion of name, dress and occupation was effectually set at rest by one remarkable observation—namely, that Caroline Walsh, the murdered woman, was known to possess very perfect front teeth—a fact sufficiently remarkable in a woman of her age to attract the attention even of unscientific observers. Caroline Welsh, on the other hand, was found to possess no front teeth, and the medical evidence given at the trial proved that the sockets of the front teeth had been obliterated in the hospital patient for a very lengthened period. This latter difference between Caroline Walsh and Caroline Welsh was too typical to be combated by the ingenuity of counsel or by the circumstances which favoured the prisoner's defence; and Elizabeth Ross was found guilty, and duly executed for her crime. It formed a notable fact of this inquiry that the body of Caroline Walsh was never discovered, although the London dissecting-rooms were duly searched. But the case against Ross was rendered the more conclusive when the granddaughters of Caroline Walsh, on being shown the remains of Welsh, distinctly alleged that the body was not that of their relative.

The famous Tichborne case presents a notable instance of the high importance which may attach to a question of identification. In the course of this celebrated trial, various

interesting points were raised, involving questions of a medical nature. The real Tichborne was known to have had an issue on one arm, and as this had been kept open for some time, it must have left a scar; but the Claimant had no such mark. No marks where bleeding had been practised on arms, ankles, and temple, in Roger Tichborne, were found in the Claimant; and the tattooing of the former was absent in the latter. A mark above the left wrist in the Claimant received no explanation from him, while the prosecution alleged that this mark was the scar which resulted from the obliteration of the letters "A. O.," which, presuming him to be "Arthur Orton," had been there tattooed.

A curious case occurred in 1875, and was duly reported in the *Dover Standard* for December 25 of that year. On December 9 the body of a man in a mangled condition was found near the Addison-road Station, and was identified by a woman named Triggs as that of her husband. The employer of Triggs and one of Triggs' children also identified the body. At the inquest, the identity of the deceased with Triggs was assumed to be unquestionable. As the hearse, however, advanced to the house for the interment of his body, Triggs himself walked into the bosom of his family, and gave a satisfactory account of his absence. The account says nothing, however, of the further history of the deceased man. Possibly in this, as in many other cases, no clue was ever obtained to his identity.

Famous still in the records of medical jurisprudence is the Waterloo-bridge mystery.

In the beginning of October, 1857, a carpet-bag was discovered on a buttress of Waterloo-bridge, London. On being examined, this bag was found to contain portions of a human frame, which had been so treated as to present a veritable illustration of the disposition of Cassim Baba by the robbers in the "Forty Thieves." In all, some twenty-three portions of the frame were discovered, these being parts of one and the same body. The portions missing were the head, the greater part of the spine, the hands, feet, and left side of the chest; whilst the internal organs were also wanting. The questions submitted to the medical inspectors for the guidance of the police in the investigation of the crime had reference to the sex, age, and height of the deceased; the cause of death; the period which had elapsed between the occurrence of death and the finding of the remains; the state of the body as indicative of its having formed the subject of anatomical research or not; and the presence of any peculiarity, normal or acquired, the discovery of which might lead towards the identification of the body.

These queries were to the whole answered with an accuracy and fulness which bespoke volumes for the patience and skill of the medical inspectors. The remains were those of a man who, judging from the full development of the skeleton, must have attained the age of between thirty and forty years, and must have measured about 5 ft. 9 in. in height. The person was probably dark-haired, judging from the colour of the hair of the wrists and knee. A stab had been inflicted between the third and fourth ribs on the left side of the chest, and in such a situation as to have penetrated the heart, whilst the appearance of the wound led the inspectors to declare that it must have been inflicted during life, or immediately after death; the former alternative being that most consistent with the facts of the case. The cause of death was, therefore, seen to be perfectly consistent with the theory of murder, and that of a very deliberate type.

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Equally important for the purposes of the detective was it to fix the probable date of the commission of the crime; but on such a point speculative rather than actual evidence alone could be offered. It was noticed that, from the perfect state of preservation of the remains, they must have undergone some preservative process, probably with the view of preventing discovery through their decomposition. They must, in fact, have been boiled and salted, and this latter feature alone may serve to indicate the cold-blooded and deliberate nature of the crime. The fact that the remains had thus been artificially preserved rendered the calculation of the period of death difficult, and in any case uncertain. But from an examination of those portions of the remains which were least affected by the process of preservation, the examiners came to the conclusion that the person might have been dead for three or four weeks prior to their examination of the remains; or, in other words, that the subject of the Waterloo-bridge murder was probably alive in the latter part of September, or even at the beginning of October, 1857.

Not a particle of evidence was forthcoming to show that the remains had been used for anatomical purposes. On the contrary, the manner in which the parts had been separated, and the clumsy fashion in which parts which could have been readily disjointed with the scalpel were separated with the saw, proved the murderer to have been thoroughly ignorant of the veriest rudiments of anatomical knowledge. But the practice of the public in frequently rushing to the conclusion that mutilation must of necessity be the work of the medical student, is founded upon an entire want of appreciation of the labour and nicety involved in anatomical study; whilst such a supposition can only favour the escape of a criminal, by distracting attention from the true state of matters, and by thus affording him time and opportunity for escape.

In the latter case, no peculiarities of structure existed which could have been singled out with a view to the identification of their possessor; and hence, owing largely to the want of this particular kind of evidence—the kind of testimony which tells most favourably in the hands of the detective—the Waterloo Bridge tragedy, in all its ghastly details, has tacitly passed into the limbo reserved for the undiscovered horrors of our own and other ages. Not a single direct clue was forthcoming as to this mysterious crime. The articles of clothing found in the bag afforded no certain evidence of the nationality of their possessor. They were torn, and stained with blood; and a very distinct stab must have been inflicted through the double collar of an overcoat, this injury probably being of an equally fatal nature with the stab already spoken of as having been inflicted in the chest. The police inquiries appeared to point to the shifting maritime population of the Thames as the most likely source in which a clue to the mystery should be sought. A Swedish sailor was believed to have been the victim; but there were not wanting those who thought then, and think even now, that the crime was of deeper nature than that indicated by the hypothesis of a seaman's quarrel. The care shown in the disposition of the remains was said to be inconsistent with the unskilled ways of sailors, and pointed, along with circumstances of the death, rather to the revenge of more accomplished assassins. The fate of Count Fosco, in Wilkie Collins's "Woman in White," is thus believed to have been that of the victim whose remains came to rest on Waterloo Bridge in 1857. The fact of the deceased having probably been a foreigner, and possibly being in hiding in London from his enemies—on the latter theory of the crime having been one of political revenge—may account for the want of success which met the efforts of the police in tracing his identity.

HOW TO BECOME THIN OR FAT.

BY A SURGEON TO SEVERAL METROPOLITAN HOSPITALS.

EIGHTH PAPER.

THE *drink cures* can only be truly characterised as insufficient, useless, and, unfortunately, even dangerous. As a rule, these methods of treatment are unconnected with any regulation of diet, and depend upon drinking of cold or warm water, or of salt and water (either the ordinary cooking salt or Glauber's salts), which may or may not contain iron. This is the kind of treatment so fashionable in many German watering-places to which many of our physicians have recommended their patients, much to the damage of the latter. Though I should be sorry to infer that any other object has been in view but to benefit the patient to the best of the

physicians' belief, still there are those who think that this pandering to a fashionable mania would seem to have been utilised on the principle of "You scratch my back and I'll scratch yours." Doctor So-and-So, of the modern Babylon, recommends Lady Gourmandine to go to *Bad Von Grand Humbug* and consult his friend, the learned Dr. Von Cure Everything, and after a residence of six weeks or two months Dr. Von Cure Everything strongly advises Lady Gourmandine to return to the modern Babylon, and to regularly consult his friend, the fashionable London doctor. Now, this is said not unkindly, but simply to draw the attention of physicians to the fact that the results of a temporary residence at a fashionable watering-place, whether with or without a certain course of diet and regimen, cannot be permanent; and that the plan is often harmful I have had many proofs, as ladies and gentlemen, especially the former, have come back to London pale, weakened, with irritable hearts and perturbed tempers, and have very soon regained the fat which the purgative waters they had taken, added to low diet and regular living, had abstracted from them. Had those physicians explained to their patients that the same effects could have been produced without going to any baths whatever, they would have spoken the truth, although, perhaps, knowing the weakness of human nature, they thought that their advice would either not be followed or believed in. I do not wish to be understood to condemn the custom of visiting either foreign or English watering-places, but I wish to purify such a course from all humbug, and to make it plain to the public that however often and however long they may go to baths, and however much money they may spend, that the cure will not be permanent unless a proper dietary—one that is conformable to modern physiological principles—be adopted and persevered in, as a matter for their lives.

Sir Benjamin Brodie, the first surgical authority of his day, truly said:—"There is no sanatorium on the continent to which a parallel cannot be found within the British Isles, to which delicate patients may resort in summer or in winter, without exchanging their own language for a foreign tongue, without being mercilessly fleeced by strangers, and with a certainty that air, climate, scenery, and water will do them as much good as they can ever expect to derive from foreign parts." And I would add, there are plenty of first-rate health-resorts and establishments in this country where the too fat or too lean can derive every benefit at a far less expense. Continental journeys are only fashionable follies; they are certainly not necessary, and they have been often prejudicial to health and pocket.

People are too apt to forget—or, perhaps more correctly, have not the acumen to perceive—that change of air, scene, climate, and mode of life often do the good which is put down to a certain reputed water. At best, the active ingredient of most of these foreign waters is common Epsom salts, which, being purgative, acts by reducing the body-weight at the expense of the patient's strength. All these water-drink or bath cures, especially when combined with modifications of Banting's diet cure, may be placed among the *abstraction* cures, *i.e.*, those that aim at cure by abstracting from the body excess of material taken, and act on a wrong principle.

The *dietetic* cures, so-called, are of two kinds. In the one, changes in the quality of the food are alone insisted

on; and in the other, *regimen*—*i.e.*, the mode of life—as to exercise, air, climate, &c.—is ordered; but all the cures which have been fashionable hitherto are, in reality, *reducing* or *abstracting* cures—that is to say, they diminish the fat at the expense of the bodily health. Physiology teaches that the proper course to pursue in order safely and permanently to conquer obesity is by a combination of appropriate diet with a suitable mode of life, the only question being as to the best dietary and manner of living. I would here insist that, in my view and experience, the treatment, to be rational, must vary with the individual peculiarities of each case, which must be treated on its merits; and, moreover, that *it is unwise, as a rule, attempting to gain too rapid results*. The diet and mode of life must be so arranged that the patient can continue them with comfort and benefit for the rest of his days, if necessary. It is comparatively easy to make a fat person rapidly thinner, but this heroic treatment can only be applied for a short time, because it is inefficient and dangerous, and when it is left off, the patient, if his health be not ruined, soon becomes fat again. The difficulty hitherto has been to discover a method by the use of which the sufferer continues to feel well and strong, so that he is thereby encouraged to persevere in it. It is well to have it clearly understood at the outset, that a good deal of moral courage and strength of mind are necessary to persevere with the exercise ordered; but in the end perseverance will assuredly lead to success, and use and habit will soon make it to become a second nature. Moreover, there is just this encouragement, that in some cases the constitution may in time become sufficiently changed by the diet and manner of living adopted, so as to render a very strict adherence to the rules less necessary; but if the stomach be a person's god, as in those lovers of the table who would rather lose years of their life than give up the good things of this world, such people had better not begin the cure. People of this sort argue that they require a lot of nourishment to keep up their frames; this is a convenient statement, but at best only a poor cloak to disguise their weak natures. It is no use trying to convince them of the truth of the statement that to prevent, or to cure, obesity, an alteration in the *quantity* of their diet and of their mode of life, according to physiological principles, is absolutely necessary. Even Shakespeare's authority:—

"Make less thy body, hence, and more thy grace;
Leave gourmandising; know the grave doth gape
For thee thrice wider than for other men;"

will, I fear, have little effect on them; but rather, as the Devil can quote Scripture to suit his purposes, they will reply, with scriptural emphasis, "Let us eat, drink, and be merry, for to-morrow we die."

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The Family Circle

"The child is father of the man."—Wordsworth.
 "In bringing up a child, think of its old age."—Joubert.

HOW TO CLOTHE CHILDREN.

By ADA S. BALLIN.

THIRD PAPER.

Boys and girls should be dressed alike till the boys are breeched. From the time they are short-coated they should wear next the skin a garment of flannel or spun cotton—linen, silk, and calico are bad, be the weather warm or cold, because they do not absorb the perspiration. Over this should come a long-sleeved and high-necked bodice, fitting to the figure so as to give support without pressure; the drawers and petticoat, or petticoats, should be fastened on to this, so as to distribute their weight equally. Combination-drawers and vest are very convenient and good, provided the edges overlap each other where they fasten, so that no part shall be exposed; and then the petticoats only—which should reach to the ankles—need be fastened to the bodice. Socks ought never to be worn, and the stockings should be pulled up about a couple of inches over the ends of the drawers, which ought to fit round the knee, and be fastened with suspenders to the bodice under the petticoats, as the pressure of garters is injurious. As to the colour of flannels and stockings: white is the best, for white things show the dirt, and are likely to be changed oftener than coloured, which is a great advantage, for, as Dr. Richardson says, "Health will not be clothed in dirty raiment;" moreover, dyes bring new dangers. The colouring principle of the aniline dyes, of which the worst are the red and yellow coralline, is a very active poison, and produces an eruption on the skin which has more than once been mistaken for erysipelas, but which disappears when the irritating cause is removed. In No. 3, Vol. 1. of this Journal, p. 34, attention was drawn to Dr. Woodland's cases of eruptions on the legs and feet caused by wearing red stockings. Yet such is the wanton ignorance on this subject that red flannel is frequently worn next the skin, and in every chemist's shop we see dozens of "chest protectors," made of material dyed with this poisonous stuff, in spite of the fact that so long ago as 1876 Dr. Richardson published a case of disease resulting from the wearing of such a "comforter," together with some strong censure of the use of the aniline dyes.

A very pretty and most durable winter dress for a child under five can be crotched or knitted out of thick Berlin wool; it should, like all children's dresses, be made to reach throat, wrists, and ankles, not according to the absurd fashion of making dresses low where they ought to be high, and high where they ought to be low. In choosing materials, care must be taken to avoid weight while securing warmth, and above all, they should be inexpensive and strong, so that the child may not suffer from being forbidden healthy play lest its clothes should be spoiled. It must be a poor sort of mother's love—and yet it is a very common one—which prefers the welfare of the clothes to that of the child. If a woman wants a block to set fine clothes on, let her get one made of wood or wax, but not turn her little boy or girl into one.

I cannot do better than describe here one of the prettiest children's dresses I have ever seen, which at the same time was one that would bear any amount of hard usage. It was on a girl about five years old, and was made of rough sage-green serge—arsenic green must always be avoided.

The body was finished at the throat with a little frill, and the sleeves, which were long to the wrist, had a small puff at the shoulder. The skirt fell in loose folds to the ankles, and its junction with the body was covered by a sash of the serge loosely tied round the waist. The child wore a grandmother bonnet of the same stuff.

Skirts and petticoats should always be loose enough to allow every freedom of movement. Scotch suits for boys are an abomination, since they expose the knees. The prettiest and best dress for them when breeched is the sailor's suit, which, by its looseness, allows free movement, is very durable, and covers all the limbs. The jacket must not, however, as is sometimes done, be cut low in the neck, or, if so cut, it must be filled up with a thick white flannel, so as to keep the warmth equal. Under the suit flannel drawers and vest should be worn.

The subject of boots is an important one, since the vast majority of feet are injured permanently through the wearing of badly-fitting ones. Till the child begins to walk, white woollen knitted or crotched socks are all that is required. After that time the boot should be made exactly to fit on the foot, and of a soft, yielding kid, so that there shall be no pressure on any part, while there is no room allowed for the foot to become deformed by spreading. There must be no roughness on any part of the inside, or corns will result; and the boots must be given up directly they are beginning to be outgrown. They should be laced or buttoned, and should cover the ankle so as to give it support. For weak legs they may be made very high, and should only be taken off when the child goes to bed. In cases of great weakness inch-broad strips of thin steel may be inserted between lining and leather from the top of the boot right down each side of the ankle; these may be made as high even as the knee, and will be found more comfortable, being very much lighter than the irons usually worn for incipient bandy legs.

However desirable economy may be, it must not be practised in the following cases, for then it would be injurious to health. We must not grudge paying our laundresses' bills, or if we cannot afford to have every article worn by our children washed twice or thrice a week, we must turn up our sleeves and wash them ourselves. We must never let children wear clothes they have outgrown. Boots must always be made to fit, by good makers, and of the expensive material I have described—what is called glove-kid, and each child ought to have two pairs, which should be worn on alternate days. The little ones must have clothes suitable for every kind of weather, so that they may never be kept indoors because they have nothing fit to go out in. They must have changes of clothes in case they come in damp. And last, but not least, however great the damage be to clothes, nothing must induce us to interfere with the little ones' romping play, for it is that which will help them to grow up strong men and women and useful members of society, instead of puny hangers-on at the skirts of life.

THE PREVENTION OF BLINDNESS IN INFANTS.

THE following excellent popular directions for the prevention of the frequent form of blindness arising from the destructive eye-inflammation of newly-born infants is being published and diffused by the Society for the Prevention of Blindness. "One of the most frequent causes of blindness is the inflammation of the eyes of new-born babies, a disease which can be prevented and always cured.

In almost all blind-schools in England and the Continent, a third, and even more, of the children's blindness is caused by the neglect and unsuitable treatment of this disease. In the Wilberforce School for the Blind at York, it is said that, out of eighty-nine pupils, thirty-seven are blind from this cause; and several eminent oculists state that half the blindness in Europe is due to this inflammation of the eyes of new-born babies. This frequent blindness is largely owing to the general ignorance of mothers, and to the unpardonable neglect of the midwives, nurses, and others who have charge of the infants in their earliest days. In many cases these persons prevent resort to skilled medical assistance, in order to try some unsuitable domestic remedies, until it is too late, even by the most skilful treatment, to save the child's sight. Although the disease appears sometimes in a very mild form, it may still, without some suitable treatment, have an unfortunate issue; but in most cases the disease takes a more determined character, and then, if left to itself, it may develop with such rapidity that, in the course of a day or two, all hope for preventing blindness is lost. In general, newly-born babies seldom suffer from any other eye-disease, and its first appearance is easily recognised by the redness, swelling, and heat of the eyelids, and by the discharge of a yellowish-white matter from the eyes. This dangerous and ruinous disease is always curable if treated at once. Immediately on the first appearance of these symptoms, send for a medical man; and, until his arrival, proceed at once to keep the eyes as clean as possible by very frequently cleansing away the matter discharge. It is the discharge which does the mischief. The cleansing of the eye is best done in the following manner. 1. Separate the eyelids with the finger and thumb, and wash out the matter by allowing a gentle stream of tepid or warm water to run between them from a piece of rag or cotton-wool held two or three inches above the eyes. 2. Then gently move the eyelids up and down in a circular way, to bring out the matter collected under them; wipe it or wash it off in the same manner. This cleansing will take three or four minutes, and is to be repeated regularly once every half-hour at first, and later, if there is less discharge, every hour. 3. It must be borne in mind that sight or blindness depends entirely in these cases on the greatest care and attention to cleanliness. Small pieces of rag or cotton-wool are better than a sponge, as each rag is to be used only once, and should be burnt immediately; sponges should never be used, except they are thrown away or burnt after each washing. IV. A little washed lard should be smeared along the edges of the eyelids occasionally, to prevent them from sticking. V. The eyes should not be covered up by any bandage or handkerchief, as the discharge is thereby prevented from escaping. VI. Fresh air and an equal temperature in the sick-room are absolutely required, and the eye, while suffering from the disease, should be kept carefully from all strong lights. Many cases of this disease might be entirely prevented by cleanliness of the eyes. 1. Immediately after the birth of the baby, and before anything else is done, the eyelids and all parts surrounding the eyes are to be wiped with a soft dry linen rag; afterwards, these parts must be washed with tepid water before any other part is touched. 2. Avoid exposing the baby to cold air; do not take it in the open air when cold; at any rate, dress the infant warmly and cover its head, because cold is also one of the causes of this eye-disease.

If we use up our life-force in brain work we have little left for muscle, and *vice versa*.

Healthy Houses

"A happy home must be a healthy home."—Anon.

DRAIN AND CLOSET CONSTRUCTION, AND HEALTH.

BY B. H. THWAITE, F.C.S., A.M. INST. C.E., &c.

A HOME, however beautiful and complete its appointments may be, if its drainage arrangements are defective, must be unhealthy, and may be compared to a fruit, beautiful in appearance, and apparently sound, but which on examination is found to be rotten and unfit for food. From the palaces of the Royal family of England, to the humble dwelling of the cottager, defective drainage arrangements are even now, in this era of applied science, and after numerous legislative attempts to enforce improvements, only too common. It was consequent upon defective drainage that the Prince Consort, in 1861, caught the deadly contagion to which he succumbed; and ten years after his eldest son narrowly escaped the hands of death from a disease of a similar origin. Still later, illnesses of other members of the Royal family have been traced to the same cause. The scourge known as the "Black Plague," which has at various periods of history swept over Europe and Asia, almost decimating the population of vast cities, owes its origin to some extent to defective means of removal of the waste matters of human communities. The drains of a house are tributary channels to those human organs which separate waste matters from the human system. If these organs fail in their work, the health becomes rapidly impaired. If the closets and drains of our houses fail, from inherent imperfections, to remove or carry away refuse and waste matters to some position where their deleterious properties can be neutralised or destroyed by nature or by art, serious danger to health will be the inevitable result.

Nature has provided a means by which the organic waste matters, or those arising from our bodies, are rendered not only harmless to health, but useful to man. Indeed, one of the most sublime and economical of the laws of Nature is that relating to the absorption of animal waste materials by the vegetable world. The nitrogeous elements which form the principal constituent of animal waste, if placed at the roots of plants, are absorbed by them, and aid in building up their structure. How simple and economical is this law of Nature that the waste from the animal world is useful to the plant creation. The flagrant, careless, or ignorant violation of this law is perilous. For if our refuse matters are not removed to some position where they can be rendered harmless by atmospheric oxidation, or useful by being placed as manure to the roots of vegetation, they become decomposed, and liberate gases of injurious character. The gases from the decomposed stagnant organic wastes or sewage are not of such an offensive odour as are those from fresh sewage; but the former have a foetid smell, and when this is perceptible, then danger to health exists. The more highly offensive odours emanating from the fresh sewage of healthy humanity are not in themselves dangerous to health. Nature, by rendering obnoxious to the sense of smell the odours from organic sewage, has contrived forcibly to impress upon animals the necessity for a proper and immediate removal of their wastes; and this natural impression or instinct, which is truly one of self-preservation, is particularly noticeable in the lower animals. The most primitive form of drain construction, and one which is even now only too commonly used, is

that known as the "rubble" drain; consisting simply of the use of stone flags, with joints of clay to form the bottom; the sides of the drain being built of rough rubble or uncoursed stones, covered in turn with stone flags often very imperfectly jointed.

The house inlet to the drains is often fixed in the cellar or basement, and is usually formed of an iron grid or a perforated dished stone, covering the drain, which at this point is occasionally made rather deeper, and an attempt, more or less imperfect, made to form a trap. Very rarely is the bottom of the drain made to slope, or fall in the direction of the main sewer or cesspool. The slope is often, indeed, made for some distance to fall towards the house. In this part of the drain the sewage must always be of a considerable depth before it can flow off, thus forming an elongated cesspool filled with a stagnant and noxious deposit. The absence of flow soon produces such an accumulation of sewage that the drains become entirely choked. Through the imperfectly-formed joints the sewage and its gases percolate and escape, until the whole of the subsoil and foundations of the house become saturated. This saturation produces subsidence of the drain, and its joints gape wider still, allowing all the sewage to escape. If there is a spring or running stream, or if the subsoil is porous, the sewage pollutes the neighbouring soil for a considerable distance, and also possibly the water of some neighbouring well or spring, and thus by one single defective drain a serious danger to a whole neighbourhood may be created.

Before the Public Health Act of 1848 came into operation, most of the drains of our large towns were formed either of the "rubble" construction just described, or on what is known as the "barrel drain" system—almost as imperfect as the former. Instead of bricks, with sides radiated so as to form close joints with each other, square bricks are used in the barrel drain. A little consideration will show that if square bricks are placed together so as to form a circle, they will only come in contact at one corner; the rest of the joints will be very imperfect, and will allow the sewage to escape into the subsoil. Although this system of constructing barrel drains with square bricks is so transparently imperfect, yet in nine cases out of ten, existing barrel drains have been thus built. In country houses, the drains generally lead the sewage to a cesspool. If cesspools are properly constructed, efficiently ventilated, often and regularly emptied, and fixed in some position where the sewer gases emanating from them cannot contaminate the surrounding atmosphere, they are comparatively harmless; but if these important conditions of safety are absent, they may become the source of disease. Too commonly, cesspools are simply built of loosely-walled and badly-jointed bricks, through which the sewage percolates as fast as it enters the cesspool. Cesspools have been allowed to empty their own contents in this manner into the surrounding soil for years, until some epidemic of

fever has compelled the authorities to remove or reconstruct them. As evidence of the disastrous effect of badly-constructed cesspools, and of the advantage gained by even a slight improvement, it is only necessary to state that, according to Dr. Pettenkoffer, of Munich, the mere cementing of the sides and bottoms of the imperfect cesspools in and around Munich has resulted in a decrease of deaths in the population of that city from typhoid or enteric fever alone, equal to 30 per cent. Dr. Pettenkoffer has published results, which show in a striking manner that the impurities given off by the old accumulations in cesspools have a dangerous effect upon the air of a town; and these results were abundantly proved by the decreased mortality of the population of Munich, when the cesspools of that town were abolished in favour of a well-designed system of sewerage. A cesspool to be properly constructed should be built on a solid and impervious foundation, formed of Portland cement and concrete, a layer of which latter substance should entirely surround the brickwork forming the sides of the cesspool.

The bricks for the latter should be hard (the quality known as *blue brick* is the best), and if the cesspool is circular in plan, the bricks should have radiating sides, so as to form close joints, which should be well cemented. The inside of the cesspool should also be entirely lined with Portland cement. The sides should be built up to a height of at least six or eight inches above the ground, so that the rain or any other surface water cannot enter and fill it to overflowing. The cesspool may be covered with hard brickwork or stone slabs. Numerous apertures should be left in the cover to allow of free ventilation. Cesspools should also be pumped out or otherwise emptied at short and regular periods.

POISONING BY COAL-GAS.

In connection with the recent Hygienic Exhibition at Berlin popular lectures were given from time to time by various eminent men upon important matters of public health. One of the last so delivered was by Professor Pettenkofer, who chose for his subject coal-gas poisoning. After pointing out that the products of the burning gas were no [more] noxious than the exhalations of human beings, and that really gas illumination did not consume so much oxygen as an equivalent number of wax candles would do, he passed to his main thesis, which was the poisonous action of the gas itself. The escape of gas in a house can be readily and at once detected by its peculiar odour, but it is otherwise when the escape takes place in the ground from breakage of the mains, whence it finds its way into the basements of houses. The evil effects of such escape had been exemplified in Italy, in Cologne, and Breslau, and he believed that such cases were far more frequent than is supposed. The poisonous property of coal-gas depends upon its containing carbonic oxide (*viz.*, 10 per cent.), the other constituents, although irrespirable, not acting as direct poisons. From Grube's researches it is evident that the danger of this gas depends not so much upon long exposure to a mixture of air and carbonic oxide, as upon the amount of the latter contained in the air. Air containing a proportion of 5 parts of carbonic oxide in 10,000 can be breathed for hours and even days by men and animals without any injury to health; whilst a proportion of 7 or 8 in 10,000 causes appreciable discomfort; of 20 in 10,000 difficulty of breathing, weakness, and uncertainty in gait; twice that proportion leads to stupefaction, and higher proportions to extreme and fatal effects, referable to the nervous

MURDOCK'S LIQUID FOOD. — Extract from the *Lancet*. — This American preparation is described as "an extract of beef, mutton, and fruits, containing corpuscles, and 12½ per cent. of soluble albumen." The solution gives the blood spectrum very strongly, and contains so much albumen as to become almost solid with dilute nitric acid. Of course it is an exceedingly powerful and easily digestible form of food. It is calculated to be of the utmost use in medical practice. Among other applications, the use of the liquid food as an enema will strike every one. — VAN ABBOTT, Infant, Invalid, and Diabetic Food and Mineral Water Warehouse, 5, Princes-street, Cavendish-square, London, W.; American A B C cereals and foods generally. Depôt for Brand's (May Fair) Meat Preparations. — [ADVT.]

DR. NICHOLS' PENNY VEGETARIAN COOKERY-BOOK. — Every household should possess this marvel of cheapness. Free for 1½d. — NICHOLS & Co., 23, Oxford-street, London, W. — [ADVT.]

system. The occurrence of cases of illness directly attributed to the entrance of gas into houses from the mains has been found to increase in the winter months, a fact partly explained by the more frequent breakage of the pipes in that season, and also perhaps by the closing of windows and artificial heating of rooms, inviting the accumulation and entrance of the gas from without. Gas thus filtered through the soil may be quite odourless, at any rate until it has collected in large amount; and herein lies the danger to the dwellers in the basement of a house. On the earliest occurrence of symptoms such as headache, the windows should be thrown open, and if on their closure the symptoms reappear, it may be suspected that there is an escape of gas near the house. The mains should be examined and the defects repaired without delay; but Professor Pettenkofer urged that it would be well that the police should warn all the inhabitants of houses in the vicinity to see that their rooms were kept thoroughly ventilated. For when the gas remains in the soil it may again find its way into houses when the rooms are artificially heated in the cold season. In conclusion, he remarked that he had chosen this subject for his lecture to show how important it was in hygienic inquiry to pay attention to minutiae; and he urged that every university should have attached to it a hygienic institute, such as Munich and Leipsic possessed, and as Göttingen was about to have.—*Lancet*.

TO KEEP LEECHES.—It has lately been recommended to keep leeches in water in which one-thousandth part of salicylic acid has been dissolved, and to renew this water every three weeks. The leeches are said to keep well in this manner, and to retain their full suction power.

NOVEL METHOD OF DUST COLLECTION.—The National Society proposes a method of rendering our London atmosphere less unsavoury—a most important matter, especially during the summer months, when there is scarcely a street in London free from the sickly smell of decay. The part of the householder is to burn the vegetable refuse, which can easily be done without smell by first drying it daily under the kitchen fire, and deposit the incombustible dust in metal pails. The part of the vestries is to collect compulsorily from every house weekly—why not twice weekly? The cost of collection—an important consideration—would be greatly diminished by the universal use of the metal pails. The accumulation at the bottom of an enclosed dustbin is not pleasant to contemplate.

POISONOUS WOOD.—The use of a wood from Panama, called cokobola, in the manufacturing interests in Bridgeport, is attracting the attention of the Connecticut State Board of Health. The wood is cheap, takes a brilliant polish, is easily worked, and is used extensively for knife-handles and ornamentation. Workers in the material are poisoned, somewhat after the manner of sumac, although some are free from any effect. Swelling of the face, closing of the eyes, appearances of being burned on the hands are the usual symptoms. Some are attacked with distress in the stomach, with loss of appetite. One person who was a confirmed smoker, after being poisoned, has been unable to smoke, or even stay in a room where there is any tobacco smoke. Children playing in the sawdust of this wood, which had been dumped, were badly poisoned about their feet. At a large factory on Elm-street, where this wood is extensively worked, chickens in the adjoining yards are said to have all died from eating the dust that settles on the grass.

Recreation and Health

"Health is the vital principle of bliss,
And Exercise of health."—*Thomson*.

PHYSICAL EDUCATION IN AMERICA.

PART I.

By D. A. SARGENT.

(From the "North American Review.")

To those who are familiar with the subject, it has long been evident that there exists in the public mind a widespread misapprehension as to the amount and the system of physical training in American colleges. The tone of current newspaper comment—often humorously intended, to be sure—is nevertheless misleading to readers whom it unconsciously influences. Athletics, gymnastics, and aquatics are not the chief subjects of college instruction, as certain editors would have us believe, and as a certain proportion of otherwise intelligent people seem really to suppose. And in the present article we desire, as briefly as possible, to correct this mistaken notion, and to call the attention of educators to the urgent need of some system of physical exercise in our higher institutions of learning.

During the past few years the science of physiology and hygiene has made rapid advancement. The elementary laws of health have been more widely diffused and more intelligently followed by the people at large. The medical profession are trusting less to drugs and more to natural agents. Air, food, sleep, and exercise, when properly administered, are great remedies as well as great preventives of disease, and doctor and patient alike begin to realise this fact. Our houses are better ventilated, our tables more healthfully provided, our time for sleep is lengthened, outdoor games are growing popular, and our styles of dress have been perceptibly modified in favour of health and comfort. The spirit of the age is recognised by the governing bodies of our colleges and seminaries, who announce in the catalogues of their institutions that due attention is given to health and physical training. Parents are attracted by these announcements, and send their sons and daughters to college in the confident hope that they will receive physical as well as mental training and development. But their expectations are seldom realised. The intelligent system of physical culture which they had been led to expect exists only in the imaginations of the trustees and faculty.

It is true that nearly all of the larger seminaries and colleges in the New England and Middle States are provided with gymnasiums, or their students have access to some place for practising physical exercises. In a few of these institutions light gymnastics are made a part of the curriculum, and are conducted under the eye of a capable instructor. The apparatus used consists of wooden dumb-bells, wooden wands, and Indian clubs, which vary in weight from one to four pounds each. The movements are arranged in a progressive series, and are designed to call into gentle activity all the muscles of the body. The time allotted to these exercises varies from one hour to two hours a week, and extends over a period of from three to

HAMPSTEAD.—High and healthy position, near the Heath. STANFIELD HOUSE SCHOOL for sons of gentlemen. Home comforts; and the health of pupils carefully studied. Individual teaching. Principal: Mr. W. R. MARSHALL (several years' experience), assisted by eminent masters. Prospectus on application.—[ADVT.]

eight months. In some cases regular attendance is required for the first year only, in others it is kept up throughout the school or college course. The maximum of required gymnasium work in any institution is not over two hours a week, and in one instance it is but one hour a week for a single term. No one acquainted with the structure of the human frame, or knowing anything of its natural requirements, will undertake to say that a half-hour four times a week devoted to muscular exercise is excessive, especially when the apparatus used is of the lightest description. Yet this is all that is provided in the way of physical culture by the corporation in the best of our literary institutions.

Now, what does the student do for himself? This depends partly upon his temperament and disposition, and partly upon his surroundings. If he is strong and robust, overflowing with life and vigour, he takes naturally to outdoor sports; if he is of a studious turn of mind, or of a phlegmatic or melancholic temperament, he is less inclined to active exercise and falls more readily into sedentary habits. These inherited tendencies are sufficiently strong, we think, to warrant us in grouping college students in four great classes:—(1), The athletes; (2), the sporting men; (3), the scholars; (4), the idlers.

The class of athletes is made up of those who give most of their time and energy to boating, base-ball, foot-ball, and general gymnastics. Those who take part in these sports are chosen on account of their peculiar fitness for the position to be filled. A candidate for the university crew must possess at the outset a large and vigorous frame, must be especially strong in the back, loins, and legs, and have great powers of endurance. These qualifications, we say must be possessed at the outset, or a man cannot hope for a place in a college or a class crew, and outside these crews very little rowing is done by individual students. The improvement in the art of rowing has shut out the majority from participation in this sport. If they own boats, well and good; they can row when they like, and as long as they like; but, unfortunately, this luxury can be enjoyed only by the few. Moreover, other obstacles, such as rough water, rainy weather, low tides, obstructions in the river, and its distance from college, combine to render this sport impracticable and unreliable as the sole agent in any system of physical culture. Even where every provision is made to render this exercise accessible and attractive, but a very small percentage of the students avail themselves of it. At Harvard, Yale, Columbia, and Cornell, less than five per cent. of the students row regularly; and in the smaller colleges we find that, unless a regatta is anticipated, the boat-house is hardly opened at all. A few years ago several of these smaller institutions sent representative crews to Springfield and Saratoga. The money raised to defray the expenses of these crews was subscribed under the pretence of awakening a general interest in boating, whereas it benefited only those who underwent the three months' training, and was of personal interest only to those whose physique insured them a place in the next year's crew. And when we look over the ground to-day we find that the only men who are enjoying the advantages of boating are the men who do not need them.

PERFECT DAYLIGHT.—Chappuis' reflectors supersede gas in day-time and improve natural daylight. They can be adapted to any window, fanlight, skylight, area light, &c., wherever natural light is impeded owing to the bad construction of premises or the proximity of walls or buildings. They will be found to promote health, comfort, and economy. They can also be used as screens or blinds, and at the same time they act as daylight diffusers. More than 30,000 are in use in London alone. For prospectuses address two stamps to (H.) CHAPPUIS, patentee and manufacturer, 69, Fleet-street.—[ADVT.]

These remarks in regard to the boating men are almost equally true of the ball-players. The game has been reduced to a science, and only one who possesses the necessary skill and experience can hope to belong to the nine. In most cases this skill is acquired long before entering college, and the tendency thenceforward is to develop to the extreme the abilities that have already displayed themselves. To maintain the standard of excellence now required of college players necessitates from two to three hours' practice daily in the field and a winter's work in the gymnasium. This is more time than is needed to keep the body in good working condition, and more than the mass of students can spare. Hence, to the majority the advantages of base-ball are practically denied. Only eighteen men can play at a time, and two regular nines are all that the largest of our colleges maintain. The game, therefore, is limited to a class of experts, and only those who are members of the nine get the benefit of systematic training.

A MAN WITHOUT HANDS AND FEET.—The Geneva correspondent of the *Times* records the death of Jean Trotter, a man who, by dint of sheer courage and energy, overcame almost insuperable difficulties, and showed that life, even when it seems almost a curse, may be well worth living. The man in question was born in 1831, at Arare, in the canton of Geneva, without hands and without feet. His short arms were pointed; and his legs, such as they were, not being available for progression, he was able to move only by twisting his body from side to side. His case greatly interested the surgeons of the neighbourhood, and local Barnums made the parents—well-to-do peasants—many tempting offers to turn their child's misfortune to account by exhibiting him about the country. But these offers were invariably declined, and when Jean was old enough, he was sent to school. In writing, he held his pen at the bend of the elbow; and, as he grew older, he took great interest in husbandry, became an active haymaker, used the reins with dexterity, and was so good a shot, that he often carried off the first prize at the village *tirs*. He enjoyed, too, some reputation for sagacity, was consulted by his neighbours on matters of importance, and has left a widow and four children amply provided for.

ANTISEPTICS AND VOLATILE PRODUCTS OF DECAY.—An investigation of antiseptic substances has led M. Le Bon to the following interesting conclusions, which we translate from the *Polytechnisches Notisblatt*:—1. The disinfecting power of an antiseptic is weaker the further decomposition has advanced. 2. The most energetic of the disinfectants are permanganate of potash, chloride of lime acidulated with acetic acid, sulphate of iron, carbolic acid, and the glyceroborates of soda and potash. 3. There is no connection between the disinfectant power of an antiseptic and its effect on microbes. 4. Neither is there any connection between the power which prevents decay from setting in and that which checks or stops it when it has once begun. 5. Antiseptic substances in general exert but a slight effect on bacteria; an exception is found in those substances, like corrosive sublimate, which are violent poisons. 6. The poisonous action of a decaying body has no relation to the poisonous qualities of the volatile alkaloids evolved from the decaying substance. 7. These volatile alkaloids, which form only during advanced stages of decay, are very violent poisons, resembling prussic acid and coniine in toxic effect, showing how injurious the air from graveyards may be under certain circumstances, even when there are few, if any, microbes present.—*Scientific American*, April 28, 1883.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sidney.*

ARTIFICIAL CORK.—A German patent (23,765, Feb. 6th, 1883) granted to Grünzweig and Hartman, in Ludwigshafen on the Rhine, covers a process of making artificial cork by thoroughly incorporating 63 parts of ground or powdered cork chips with 180 parts of boiling starch-paste. The resulting plastic mass is pressed into forms, and after removal from the latter, dried in hot rooms.

* * *

WATERCRESS.—At the June meeting of the Therapeutical Society in Paris, one of its members, M. C. Paul, in discussing the merits of the above crucifer, said he was of opinion that its antiscorbutic and various other virtues were over-extolled. Looking at its chemical composition, an essential oil composed of sulphur-sulpho-cyanogen with a hydro-carbonised radicle—allyle—which gives rise to eructations hours after eating it, its bitter extract, its iodine, iron and phosphates; he said that each of its component parts taken separately is in itself intolerable to most stomachs. He admitted that the iron, iodine, and phosphates would indicate its use in scrofulous or scorbutic cases, but suggested that other vegetables have this merit without the drawback of being trying to delicate stomachs. If eaten at all, he recommended that only the young shoots and leaves should be taken, the ligneous parts and stem of the plant being discarded. He cited the following instance to prove that it takes a longer time to digest than other articles of food. "A Geneva doctor had a patient who could be sick at will. The doctor took advantage of this peculiarity. He made his patient bring up the contents of his stomach, sometimes one hour, sometimes two hours after meals—in fact, when he liked. Upon examining the process of digestion, the watercress was always amongst the last thing to be digested, taking the same position, as regards time of digestion, as hard-boiled eggs." M. Paul concluded his remarks by inviting some one else present to express his opinion on the subject. Whereupon M. Noel Gueneau de Mussy rose and said that he believed cress to possess real therapeutic effects, especially in cutaneous diseases. He well remembered a striking case of a lady who had been to every physician in Paris to obtain relief for eczema, from which she suffered so severely that her nails actually fell off, her tongue also was covered with patches of eczema; she had been in this deplorable condition for fifteen years. After ineffectually trying all the armamenta of the Pharmacopœia, he at last in despair prescribed this plant to be eaten three times a day. In six months she was almost cured, and this was not an isolated case. He advocated its being cooked and eaten like spinach, which would make it more digestible. The juice was an excellent medicine, but it ought to be made at home by squeezing the plant in a press, after having first washed it very carefully in much water; he insisted on this, as the spawn of toad was sometimes deposited in the leaf. M. Campardu now followed in the discussion, and spoke favourably of its medicinal properties. M. Paul observed that diabetics derived benefit from taking it, and he had successfully prescribed in many such cases.

HIGH HEELS.—Since the high heel made its appearance, medical men have more than once borne witness to its bad effects. The late Mr. Hilton condemned it. Others have done the same. Of late years public opinion has done away with certain of the long-established extravagancies of dress, and has given rise to methods more agreeable to the symmetrical development of the body. We hope that in the process of reform, the feet, in which too often vanity pays a price which is dangerously expensive, will not escape notice. The evils of the high-heeled boot or shoe are due to the fact that it is an essentially badly-fitting article. It is made in defiance of the relation which it ought to bear to the anatomy of the foot, and to the direction in which the pressure of the body weight falls upon the latter. Hence the peculiarly cramped walk of ladies of the present day. Anyone may observe the consequences of the "advanced position," nearly under the instep, and the increased height, of heel, in the substitution of a forward inclination of the body, and a trip suggestive in a measure of the stumbling gait, for the upright carriage and the free and graceful swinging movement natural to the leg in walking. These matters, as far as they are merely relative to deportment, do not strictly concern us, but there are attendant circumstances which deserve comment. The boot or shoe, in order that it may not shift on the foot which has lost much of its usual purchase of direct downward pressure, must hold it firmly, and even tightly, and in particular it is necessarily constructed so as to hold with undue firmness just above the back of the heel. With some persons perhaps no inconvenience results, with others who have fine skins chafing is readily produced. This is in itself a trifle, and is presumably altogether too inconsiderable to affect the will of fashion, but it may nevertheless be the slight beginning of graver troubles. Probably there is no practitioner fairly long acquainted with town practice who cannot recall a case or cases in which extensive inflammation of the leg with abscess formation has followed even such a slight abrasion, and the exciting cause when looked for was discovered in the patient's shoe. There have even been instances, fortunately rare, but still occasional, where abscesses arising round some neglected trifle of this kind have ended fatally. These are facts which cannot be denied, and should not be overlooked; but even if they could, is there any woman with a mind of her own who will say that the dainty step so much desired by some, bought as it is at the cost of healthy muscular exercise, is not over-valued? We rather hope that the honest feeling and the sound judgment which have guided that sex in many better purposes, will ultimately overcome the false sentiment which now leads certain of its members to support an unbecoming and injurious custom.—*Lancet.*

Our Bookshelf

"Reading maketh a full man."—*Bacon.*

MEDICAL NURSING.

Lectures on Medical Nursing. Delivered in the Royal Infirmary, Glasgow. By J. WALLACE ANDERSON, M.D., &c. (Glasgow: James Maclehose & Sons.) 1883.

THE status and position of the modern nurse are widely different from those enjoyed by her predecessor of even a few years ago. The nurse of old was merely an untrained servant, who, by rule of thumb, continued to discharge

certain duties, and as often as not attained a certain perfection in her calling through the media of many errors and mistakes. To-day the nurse is, firstly, a trained woman. She is often a gentlewoman, educated and refined. She undergoes a special education in the essentials of physiology and anatomy, and she is further instructed in the *technique* of her profession—not merely by practice in the hospital ward, but also through regular systematic instruction given to her class by the physicians and surgeons of the infirmary. "Nursing" is thus emphatically a profession of to-day. It is that branch of medical practice which seconds and aids in the most important fashion the work of the physician and surgeon. The trained nurse is a skilled observer. She reports day by day, or hour by hour, to the doctor the progress of the case. She can take a patient's temperature, bandage a wound, renew a dressing if need be, and she can cook for her patient if required. The woman who is a skilled nurse is really a highly-trained lady. She is a person possessing an acute organisation, her senses are trained to accurate observation, she is kind, yet firm withal, and she is not afraid to encounter with calmness any disaster of human life in which her aid is required. Truly, of all professions, this one of the "nurse" is that which most demands the patient, quiet industry, self-abnegation, and skill that constitute the highest qualities of the human mind.

Dr. Anderson's volume contains ten lectures on "Medical Nursing," and a useful appendix on "Invalid Cookery" and other details. He begins, wisely enough, by detailing the history of modern nursing, and shows how the nurse owes a duty to doctor and to patient, and how observation, accurate and exact, must form the basis of her education. The history of the rise and progress of nursing as a profession is given in an interesting manner by our author:—

The work done by a few German ladies amongst the wounded in the disastrous battles of Prussia with the first Napoleon led, years afterwards, to the foundation of the systematic nursing of the sick in Germany. We find, too, that a visit to the field of Waterloo, in 1816, forced upon the poet Southey the conviction that some attention should be devoted to hospitals, *as well as to poorhouses*, and in 1829 he was in correspondence with Mrs. Fry and others, not about prisons now alone, but regarding the internal management of hospitals. But little came of that and other similar projects, and we must go out of our own country to find the real beginning of the systematic training of nurses.

It dates from 1836, when Theodore Fliedner, the pastor of a small Protestant congregation at Kaiserswerth, on the Rhine, established in that little German village what he called the Deaconess Institution. There, under the superintendence of himself and his wife, a training school for female nurses was begun. It was carried on from the first in a markedly devotional spirit, and was based on the principle of the Deaconess Institutions of the Early Church.* Fliedner's Institution was therefore quite a religious community, but with no vows, as the founder always said: the only bond of union being the Word of God. It still flourishes, along with many others on the Continent which have followed in its path, and has been the training school of many a leader of the work in our own country. Pastor Fliedner died in 1864. I think there can be no doubt he is entitled to be considered the founder of modern nursing.

War again gave the next, and in the case of our own country, the first great impulse to the proper care of the sick. Every one has read about, or knows something of the sufferings of our soldiers in the Crimea. It was not that more than 3,000 men died from wounds received in action—this is looked upon as the inevitable result of war—but that six times that number should have died of

other diseases, largely preventable, which was felt to be a national disgrace. And when a lady was found who was able to meet and successfully grapple with the emergency, every one looked to her, and thought of what she had done, with quite a personal interest. On October 21, 1854, Miss Nightingale left England for the Crimea, with a staff of thirty-seven nurses, and within two years she was back again, having won the gratitude and admiration of the whole army. Her name was a household word in every soldier's home, and soon also in every home in the land. So it was that, in our own country, universal attention came to be directed to the proper care of the sick.

In Willis's Rooms, London, on November 29, 1855, a great meeting was held to arrange about a form of testimonial to Miss Nightingale which should be truly national in its character. It resulted before long in a large sum of money being collected, which was called "The Nightingale Fund." This Miss Nightingale refused to accept for herself, but suggested that it should be placed in the hands of Trustees for an object she had greatly at heart, and which she would herself supervise—the training of nurses. This being done, arrangements were at last made between the Nightingale Fund Committee, and the Treasurer and Governors of St. Thomas's Hospital, and on June 9, 1860, Miss Nightingale's Training School was opened in that hospital with eight probationers.

This leads me to say a word or two of one whose name, well known as it is, is not so widely known in the north here as it deserves to be—I mean Mrs. Wardroper, the matron of St. Thomas's Hospital. Before the Crimean War had made sick-nursing a subject of common remark, Mrs. Wardroper's attention had been directed to the general character and position of the hospital nurse, as not at all befitting the nature and requirements of such an important calling. That lady recognised that a nurse must be trained; that the care of the sick was a higher duty, was a more important and more responsible work than could be done by those who were expected to perform, in addition, many menial duties. After many endeavours to improve generally the nurse's position in hospital, and have her work confined exclusively to attendance on the patients, Mrs. Wardroper was allowed to put her ideas into practice, and what is known as "The New System" of nursing was introduced into St. Thomas's Hospital in 1858. It very soon proved a success. Miss Nightingale recognised this when, in 1860, she selected St. Thomas's as her training school.

Throughout his instructions, Dr. Anderson is always practical and clear. His second lecture on Temperature and the Pulse is a model of plain reasoning; while in the third and fourth lectures such topics as Cough, Ventilation, Food, Digestion, &c., are lucidly treated, and much information of the highest value to the nurse is thus imparted. The general details of medical and surgical practice are duly noticed, and each point of interest in the duties of the nurse is duly expounded. The directions for the use of fomentations show how an apparently simple topic deserves the close attention of the nurse:—

A fomentation is a local application of hot water by means of flannel, in such a form that *warmth* and *moisture* are combined and sustained. It is employed chiefly to lessen inflammation, allay pain, or relieve spasm. You require boiling water, flannel (preferably coarse flannel), and waterproof or macintosh. Oiled silk does not make a good substitute for the last. You prepare a fomentation in the following way:—

Spread out a towel in an empty basin, and on that lay a flannel folded eight times or so, and to the size you wish it. Then pour boiling water upon it, and wring it in the towel as dry as you possibly can. Keep it in the towel till you are ready to apply it to the patient, and just before doing so, shake it gently for a second or two to allow the admission of a little air between the folds of the flannel. Having applied it, place a piece of macintosh over it of such size that the latter will completely overlap the flannel by at least an inch on all sides. See that the whole is kept closely in position by means of a bandage or such like. If you are careful to follow these instructions, a fomentation will continue hot for many hours; but if, for example, the macintosh should not completely overlap the flannel, should even a corner of the latter be exposed, evaporation will take place at that point, and the fomentation will become cold, clammy, and worse than useless. If properly applied, however, it will continue hot, as I have said, for many hours; but in most cases you will be directed to change it every hour or so.

Never omit to shake the fomentation in the way I mentioned, so as to separate the folds of the flannel somewhat. It is a point

* There is good reason to believe that in the Apostolic Church such a community existed, and that Dorcas, Priscilla, Phœbe, and many others were members of such a society. Phœbe is expressly called a "deaconess" (*diakonos*, in Greek)—a minister or servant of the church (Rom. xvi. 1). It was probably a part of their duty to visit and attend the sick.

seldom referred to, and far too little known. The fomentation will not be materially cooled by so doing, while by being made less compact or solid, or, in other words, by having a freer admixture of air, which is a bad conductor of heat, the heat will be retained by the fomentation for a much longer time. Coarse flannel is preferable for the same reason; there is more air in its interstices.

On changing a fomentation, wipe the skin dry and immediately apply the next.

To relieve spasm, or act more as a counter-irritant, one or two teaspoonfuls of oil of turpentine are often added to the fomentation. It should be quickly sprinkled over the flannel just before the fomentation is applied. It is of great service in an attack of colic. To relieve pain more effectually, a teaspoonful of laudanum may be added in the same way.

The administration of medicines is, of course, an all-important part of a nurse's duty, and Dr. Anderson does not fail to lay stress on the advisability of punctuality and accuracy in the discharge of this function. His advice may well be borne in mind by all who have the care of the sick, whether professed nurses or not.

In hospitals you require a routine as to the giving of medicine; but in private nursing you should have some simple scheme for your guidance in cases in which the precise hours are not indicated. For example, suppose, a medicine is ordered to be given every four hours, night and day, you could arrange the hours thus—2, 6, 10 a.m., and 2, 6, 10 p.m. If four times a day you could say 8 a.m. and 12 noon, and 4 and 8 p.m.; or three times a day—9 a.m., 2 p.m., and bedtime. The patient's meals, as I have said, often determine when medicine is to be given. Stomach tonics are usually given before meals. Blood tonics, as they are called, are usually given during digestion; and so also some medicines which are not easily borne by the stomach except after food—for example, arsenic, and, in many cases, iron.

Accuracy, not only as regards time of administration, but as to the quantity administered, is most essential. Unfortunately the common system of ordering fluid quantities is both inaccurate and misleading. By a tablespoonful for a dose was originally meant half an ounce fluid measure. But the difference of opinion as to when a tablespoon is full may represent fifty or a hundred drops, and, after all, tablespoons are of very different sizes. The modern table, dessert, and teaspoons hold about twice the quantity that their old-fashioned namesakes do, and it is the latter that are meant by the prescriber. Nor is it more accurate to say so many drops. Drops differ in size according to the consistence of the fluid, the shape of the lip of the bottle, and other conditions. It is therefore much better, much safer, always to employ the standard measures, and the table of these you should know by heart. It is obviously inaccurate to understand by a teaspoonful one drachm if a modern teaspoon can with care be made to hold two drachms; or to suppose that a dessertspoonful is equal to two drachms, and a tablespoonful to four drachms or half a fluid ounce, if they can be made to hold double their respective supposed equivalents. This is being felt, and consequently the use of standard measuring-glasses is becoming more common; and one of the first things all of you should know is how to measure by the ordinary two-ounce and two-drachm measures. The former answers well down to quantities of three, or even two drachms, but drachm and minim doses should invariably be measured by the latter. It amounts to this, then: if you are told to give half-an-ounce so many times a day, you measure a half-ounce accordingly; if a tablespoonful, you should measure a half-ounce all the same. If you have no measure, all you can do is to make it a small tablespoonful; in the case of a drachm, a small teaspoonful.

Never give any part of a mixture without first looking at the label. I would ask you all to teach yourselves that habit: it may prevent many a serious error.

It will do no harm to acquire the habit of giving all mixtures a slight shake before using them, and when pouring them out to keep the labelled side of the bottle up, which will prevent the directions from being blotted with drops of the mixture.

With the precepts of this book committed to mind and practised, the nurse need not fear any test of her skill or powers which may be encountered. It is a valuable text-book, and something more besides; for Dr. Anderson writes in a spirit of true friendship for the noble profession he is dealing with, and his words are always those of encouragement and sympathy for the nurse in all her difficulties and trials.

Sanitary Appliances, Etc.

THE ZANDER INSTITUTE.

SPEAKING of the treatment of rheumatism at Aix-les-Bains, Professor Granger Stewart says (*Edinburgh Clinical and Pathological Journal*):—"The other suggestion strikes me as being of considerable importance, and I should desire to see it acted upon as soon as possible. It is, that an establishment, on the model of that originally introduced at Stockholm, by Dr. Zander, should be founded in Aix. Early in the present century, Ling drew attention to the value of passive movement and frictions in the treatment of many diseases. He distinguished two classes of movements—the active and the passive. In the former, the patient used his muscles and moved his joints in opposition to the resistance made by a carefully-trained attendant, or the patient himself resisted movements which the attendant made. In the latter were included the manipulation, friction, and kneading of skin and muscles, which are at present grouped under the name of *massage*, and have proved so useful in the hands of Weir Mitchell, Playfair, and others. From what I have said, you will perceive that the advantages of Ling's method are to be fully enjoyed in Aix. No attendants could be found in the world more skilled in *massage*, or in the performance of passive movements of the joints, than those attached to the establishment in Aix. But Dr. Zander made a distinct advance upon the old methods, when he invented a series of appliances by means of which any joint may be moved, any group of muscles brought into play, and any part of the body manipulated with the most perfect accuracy. He recognised the fact that it takes long training to produce a skilled manipulator, and that the best manipulator gets tired when he has to work at patient after patient for hours together.

"When you come to treat rheumatic and post-rheumatic conditions, you will find that there are two elements with which you have chiefly to deal. There is, first, the stiffness of the joint and the thickening of the fibrous tissues around it; and, secondly, the enfeeblement of the muscles which have been disused in consequence of the joint affection. Now, I find that Zander's machines are capable, on the one hand, of producing passive movements of the joints, and on the other, of developing and cultivating the power in muscles, aiding the feeble effort of which the muscle is capable, and thereby gradually restoring its strength.

"In Stockholm Zander's Institution is resorted to by immense numbers of people, and the admirably-equipped gymnasium which was lately established in Soho-square, London, is attaining to great popularity. It is likely, in my judgment, to be the first of many institutions of the kind which will be established throughout the country. Were the authorities in Aix-les-Bains to found and develop this Swedish system of treatment, I have no doubt that the results obtained in this great health resort would be even more satisfactory than they have hitherto been. I do not suggest that the present system of bathing and manipulation should be in any degree superseded, but only that the gymnastic exercises should be added to the other means of treatment. I believe that in the cases which are enjoying the advantage of the thermal treatment at Aix the results of the gymnasium would be far more satisfactory than they are under ordinary conditions. I hope to see the day when, not at Aix-les-Bains alone, but at Aix-la-Chapelle, at Vichy, at Carlsbad, at Buxton, at Droitwich, at Harrogate, at Strathpeffer, and at Bath—which last is happily again coming into favour, as it well deserves—there shall be Zander Institutions as adjuncts to the curative agencies so liberally supplied by nature."

MESSRS. FIELDING'S CHRISTMAS PRESENTS.

THE æsthetics of life form a complementary power in the maintenance of health, since pleasant surroundings and the culture of the beautiful together tend to make life move easily along its accustomed and normal paths. Of the varied kinds of presents which "the festive season" brings into the market, we have seen few which can rival the jewellery of Messrs. Fielding Brothers, of 42, Lombard-street, London. Their gold and silver ornaments are marvels of cheapness and elegance. The designs are neat and ornate, and the workmanship solid and lasting. The articles Messrs. Fielding offer at low prices, commensurate with the workmanship, comprise bracelets, brooches, necklets, and lockets. The silver locket, at 8s. 6d., and the neat little brooch, at 3s., are marvels of neatness and chaste workmanship. Among the Christmas presents which are certain to attract notice, Messrs. Fielding's presents should command attention.

Our Letter-Box

"Conference [maketh] a ready man."—Bacon.

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 74-76, Great Queen-street, London, W.C. Those intended for the Publishing Office to be sent to "THE PUBLISHER," at the same address.

Contributors are requested to send stamps for the return of the MSS. in event of non-acceptance. Every care will be taken to ensure the safety of MSS., but the EDITOR and PUBLISHERS cannot hold themselves responsible for accidental loss.

Correspondents are requested to write on one side of the paper only. The EDITOR disclaims responsibility for the opinions expressed by Correspondents.

QUERIES AND ANSWERS.

[Correspondents will please note that Queries addressed on Post-cards are consigned to our waste-paper basket. If information is worth having, it is at least worth a letter.]

GENERAL.

B. CARGILL.—The grey matter of the cerebrum, or true brain, exists on the outer surface; the white matter is internal. The positions are reversed in the spinal cord.

INTERESTED.—Parkes' "Hygiene" (sixth edition) is the most comprehensive book.

AUSTIN.—About 60 deg. F.

A. FATHER.—Cleland's "Animal Physiology," or Wilson's "Standard Physiology" (Chambers), should suit you.

DIOGENES.—Dr. Pratt's "Sermon to Young Men" is published by Baillière, Tindall, & Cox, London. See our publishers' column.

ANNA W.—There are objections to that course, of legal nature. Why not see your landlord on the subject?

G. ELLIS.—See our papers on "How to Get Thin or Fat."

O. X. Y.—Mr. Browning, 63, Strand, sells a lantern which should suit you, and which is well-adapted for lime-light views.

A. C. B.—No; the topic is not adapted for our pages.

LECTURES.—Address Mr. Flack, 74, Great Queen-street, W.C., who will afford all information regarding Dr. Wilson's lectures.

NINON.—We think the system will benefit you, but you should be careful not to overdo your mental work.

SANITARY.

OxLEY.—The Edinburgh Sewer Trap (29, Upper Priory, Birmingham) appears to us to be one well adapted for your special purpose.

J. AITKIN.—See our papers in early parts of HEALTH on "Disinfectants."

OCCUPIED.—We believe you cannot be compelled to carry out the repairs. Consult a solicitor.

THETA.—Take no notice of the threat. Your landlord is evidently ignorant of the law.

E. C.—Try "Condy's Fluid" in strong solution.

MEDICAL.

O'REILLE.—There is possibly some loose wax in the ear. Try the effect of careful syringing with tepid water and soap; previously dropping overnight a little glycerine into the ear. Are you troubled with chronic "cold in the head?" If so, try the inhalations recommended to "W. M. Foot," in HEALTH, No. 34.

A. S. A. W.—You are evidently morbidly hypochondriac. We cannot advise you better than to recommend you to go away for a complete change, or to have your fears removed by consulting a good physician. You are a prey to foolish thoughts, and there is no evidence in your letter that you are in ill-health. Be cheerful, and don't give way to your morbid ideas. Take plenty of fresh air and exercise.

HOPELESS.—Take a little Morson's "Pepsine" with your food; live plainly; avoid stimulants, and rest after meals, especially.

ROSE.—Give us a fuller account of your life and habits. The waterbrash may be merely a symptom of other troubles, and the difficulty in swallowing should be more fully explained. Give reference to pain, &c.

DOROTHY.—Your case is somewhat curious. We do not find in

your account any evidence of disease such as that you fear. The decrease in size may have depended on internal causes, as the parts you name are well known to be physiologically associated with other organs. We should recommend you, if the pains become persistent, to see a surgeon; but our opinion at present is that you have no cause for alarm.

E. K. P.—Yes; try the tonic you name for a time. Sleep on a hard mattress, avoid fluids at night and stimulants, and take moderate exercise.

FATIMA.—We could not recommend the use of any such medicine. Far better (as shown in the articles) to trust to physiological means, diet, &c. Follow the advice given in the articles.

QUERY.—1. No evidence of worms. Take a little "Æsculap Water" occasionally in the mornings, and be careful in diet; avoid much vegetable food. 2. What you name as food may suit one individual. There is no one rule for all. You must be guided by individual experience. The dietary you name is not one on which an ordinary man could work hard.

ROSTREYOR.—1. Take a tonic; or try a little "Pepsine" with food. See that your diet is nourishing. 2. Smith's "Foods" (price 5s.) is published by Kegan Paul & Co., London. It is a good book, and contains full information regarding the scientific aspects of foods. 3. A short walk can do no harm; but hard exercise before breakfast is not to be commended.

UNHAPPINESS.—Your symptoms are those of health under par. Take a teaspoonful of Fellow's "Syrup of the Hypophosphites" in a wineglassful of water thrice daily, before meals, for a time.

L. C. B.—1. Yes; we believe so; complete insensibility to pain can be secured by aid of the "gas." 2. Your question is a difficult one. Individual and personal peculiarities operate here, as elsewhere, to produce different effects. Other things being equal, in a person of robust health it might be more difficult to induce unconsciousness than in a weakly person.

TWINS.—Try the effect of a warm bath when the paroxysms come on. Dr. Semple's little book "On the Management and Feeding of Infants" (Kimpton: 82, High Holborn, London) should be read and studied by you. 2. Attend closely to the child's general health. Stammering is often a result of nervousness and ill-health in children. Be careful not to excite him or to scold him; and make him speak (or sing) his words slowly and deliberately. You should have medical advice about the baby.

STILL-HOPING.—Take the tonic recommended to "Unhappiness" in present number of HEALTH; don't overdo exercise; and read and follow advice given to "E. K. P." above.

GLASGOW.—For the pimples take the lime pills ordered to "Thomson" in No. 33 HEALTH. Your "shell-corns" constitute the disease known as *acne*. The sebaceous tubes of the skin get filled up, and the dust gives the "black-heads." Steam the face at night; wash with hot tepid water; press out the plugs, and try the effect of the following lotion, a little of which is to be rubbed into the face at night:—Sulphur, three drachms; glycerine, four drachms; rectified spirits of wine to make up four ounces. The diet should be non-stimulating.

F. W. D.—1. Try the effect of a little "Æsculap Water" taken occasionally in the mornings. 2. The dry hands are only a symptom of your general ill-health. 3. No; we do not preserve letters after reply is given here. 4. Thanks for pamphlet—a thorough quack production. 5. Any druggist will inform you of the price.

A. B. W.—All your symptoms will disappear when you get your system thoroughly toned up. We should advise you to take the tonic recommended to "Unhappiness," in present number; to use injections of "Condy's Fluid" (1 part to 10 or 15 water) for a time as an experiment; to let your diet be generous, but not stimulating; and to rest as much as possible. Let us hear how you are after ten days or so of this treatment. The injections may be stopped if they are of no avail after three or four days' trial, as probably they will not be needed in the latter case.

KEZIA.—Be very careful of chills and colds in convalescence from scarlet fever. Don't hurry in getting the child out, and let its food be light and nourishing. Warmth is the sheet anchor of your case, and in this way you will avoid kidney and ear disorders. For the worms we should be inclined to try the effect of a weak salt-and-water injection, or an injection of infusion of quassia. If the thread-worms increase in number the child should be prescribed for by a physician. It is well to bear in mind that the habit of which you spoke in your last may often depend on an irritating condition of the secretion, as well as upon worms; and for the detection of this an examination of the secretion by your doctor will be necessary. Your precautions in the fever were admirable.

IVENS.—You must either give up your tennis or be very moderate therein. We should recommend an elastic bandage, carefully applied, to be worn for a time. Difficult to say anything about cause, as you do not give details of history. There may be a suspicion of rheumatism in the affection.

E. LEWIS.—The affection is probably due to digestive disturbance following an irregularity in diet. Care in diet; rest after meals; and the taking of a little Morson's "Pepsine" with the food may relieve you. Give this advice a trial, and let us hear from you again. Substitute cocoa for your tea.

X. Y. Z.—1. Give your friend the tonic recommended to "Unhappiness" in present number of *HEALTH*, for a time, and report progress in, say, ten days. 2. Bathe your feet frequently in tepid water in which a little alum has been dissolved. Attend strictly to condition of shoes and stockings.

GALA.—Probably a kind of wen. Easily removed by a simple surgical operation, from which no harm could accrue.

NEW READER.—See advice given to "E. K. P." above, and take the tonic recommended to "Unhappiness" in present number of *HEALTH*. Don't be despondent; you will, by attention to our advice, get quite well.

ÆGROTAT.—Your symptoms are those of indigestion. We should recommend a more generous (but light) dietary, and rest after meals, with a little of Morson's "Pepsine" to be taken with the food. A little "Æsculap Water" occasionally in the morning would also do you good. Be very moderate in exercise for a time. Glad to be of any further service.

WILLIE.—Your description, "sediment," is too vague for any advice. The question can only be answered by a medical examination of the fluid.

J. C. COULSON.—See and follow advice above given to "Ægrotat." Rest after meals is highly necessary in your case, and also the "Pepsine." Let us hear from you again.

A SUFFERER.—Depends entirely on the nature of the stone. Only a medical examination can determine the special waters which should be drunk. If you send us stamped addressed envelope, we can (if desired) put you in the way of obtaining a reliable opinion.

GAELIC.—Unless the occurrence you name occurs too frequently, you need not feel alarmed in any way. If your general health is good, you need not mind the matter at all. See advice to "E. K. P." in present number of *HEALTH*.

J. Y. P.—Your idea of the weakness "shifting" from one organ to another is (in your case) entirely erroneous. If your digestion has improved, so much the better are you all round. Your symptoms are those of dyspepsia chiefly. Follow advice to "Ægrotat" above, and, above all, don't overdo exercise.

ANXIOUS ONE.—No need to be alarmed. Follow advice to "E. K. P." in present number, and write again, if not improved. You do not suffer from any disease.

RECTUM.—No; nothing directly to do with what you name. Try hot salt hip baths, and rub warm oil into the painful part. Avoid stimulants and clothe warmly. If the pains continue thereafter or get worse, you must see a physician. At present there is no indication, from your account, of anything beyond a slight rheumatic or muscular affection.

NO STONE TURNED.—Try the "kola" nut by all means. It has a high reputation. See article on "Sobering Remedies" in No. 30, *HEALTH*. The "kola" is quite safe, and our article will explain its effect. It is allied to coffee in action, and is not a quack medicine. Write to the proprietors stating our recommendation, and you will receive full directions with the nut.

BELISARIUS.—The following is a recipe for preparing "Koumiss," which is a form of fermented milk:—"To one pint of new milk add three ounces of water, three ounces of old Koumiss (for a ferment), and one ounce of a saturated solution of 'sugar of milk.' Put all in a large covered jug, which is to be set for twenty-four hours in a warm place. A thick crust will then have formed on the surface. Beat this up thoroughly, and mix it well. Put the whole into champagne bottles (which should be only two-thirds filled), cork, and wire. Shake the bottles daily. In two days the Koumiss will be fit for use, but is improved by keeping for six weeks. Draw off from the bottles with a tap."

ONE WHO WOULD WOO HYGEIA.—You are in good health, and the step you contemplate might be taken without fear. Your account of yourself would be regarded as quite satisfactory by any medical man. We need say no more.

C. HARDWICK.—Glad the child has improved. In regard to the teeth, we hardly understand the dentist's position, except on the ground that being her first teeth they will come out of themselves. Only bad first teeth are liable to affect the second set. Our advice to you is to see well to the child's general health, and thus brace her up. The pains, which seem to be more in the gums than in the teeth, will probably leave her.

M. L. HYNER.—Try a vegetable dietary for a time; eat brown bread, fruits, &c. Avoid tea and coffee, and rest after food. Glad to advise you again, if need be. Don't tamper with aperient medicines.

AGRICOLA.—Your former letter must have miscarried. We answer every query we receive. In your case we should lay

most stress on a wise dietary, such as you are quite capable of choosing. Food should be light—soups mostly, fruits, milk, &c. Yours is evidently a nervous organisation, for which you are your own best physician. The "Pepsine," or Lactopeptin, should aid you. We do not think electricity would be of any service in your case. Rest after meals is of vital necessity for you. Glad to be of any further service.

EGG.—1. The remarks above (to "Agricola") apply exactly to your case. You must by experiment discover the dietary which best suits you. Our idea would be that of your living for a time almost on fluids alone—soups, Brand's "Beef Essence," &c.—and give your digestive system a rest. The eructations of gas are a consequence of feeble digestion. 2. Use Rowland's "Macassar Oil," rubbed into the roots, morning and night. 3. Depends on constitution and disposition—about once or twice a week at most.

ANTONIO.—Such a condition demands careful examination by a physician. There is likely nothing organically wrong; but an opinion worth having can only be formed after personal examination. The sense of numbness after the bath is due simply to feeble reaction. The bath should not be taken cold.

J. G.—We have sent your letter to the authoress of the paper, and will reply through *HEALTH* as soon as we hear.

ELAINE.—Send further particulars, please, of your symptoms as to cough, &c., also diet, and we will advise. Your description is too meagre. What is your previous history as to health?

JUVENIS.—We cannot give other advice than that we have already indicated. You should try a little "Pepsine" with the food, which should be substantial, but not stimulating. Rest after meals also. You will gradually get rid of your unpleasant symptoms by attention to your general health.

ERNEST.—Sometimes the difference you speak of is quite normal, and exists from birth without causing any disease. Try the effect of a support in the shape of a suspensory bandage; bathe with cold water frequently, and don't overdo exercise. If not bettered, we should recommend you to obtain a surgical opinion. Possibly, all active exertion should be avoided for a time.

W. JOHNSON.—We should advise you to pay great attention to your digestion. Try a little "Pepsine" with your food. By getting your stomach into thorough order your symptoms may disappear, and in any case they will be relieved. Try for a time concentrated food (Brand's Beef Essence, &c.), and avoid all indigestible foods. Attend strictly to the action of the bowels, &c., and write again if not relieved.

T. D. P.—Thanks for your note. Hand the bill to the Superintendent of Police of your town. It is a disgraceful production—or give him the name of the seller of the article. If your death-rate is as you remark, there is certainly something far wrong. The local editors should take the matter up.

AAJAX.—1. The noises in the ear are probably due to wax. Moisten the wax with glycerine dropped in at night, and then syringe carefully in the morning with soap and tepid water. If discharge becomes severe, consult an ear-surgeon. 2. Probably some affection at the roots of the teeth, irritated by cold. Be careful of your general health in winter. 3. No need to be alarmed so long as your general health is good.

Z. A. TORRELL.—Can you give no reason for the swelling? A swelling in that situation may either be a rupture or an enlarged gland. Your doctors should be your best guides to its nature. We cannot advise on such a subject, which demands careful examination.

MELDRETH.—We should hope much in your case from electrical stimulation to the lower part of the spine, carefully applied by a medical electrician; but we also think your wisest course would be to take the step you mention. The fulfilment of your wishes will often accomplish a cure. We are inclined to think you are simply over-anxious.

A VICTIM TO ASTHMA.—Your case is simply one for the wise regulations of your food and habits. You should know now by experience the exact items which excite your attacks. See first of all to your digestion, and take "Pepsine" with your food. Glad to advise further, if need be.

J. S.—You must give your eyes a prolonged rest. Don't attempt to read at night for some months. This is your only hope of getting them thoroughly well. The sulphate of zinc lotion will only irritate the eyes. Use plain cold water, to which a few drops of laudanum may occasionally be added, and rest the eyes above all.

EUROPA.—Read and follow advice given for acne to "Glasgow" in present number of *HEALTH*. The food should consist of light soups, fish, little meat, vegetables, milk puddings, &c. No stimulants. The soap you name cannot be excelled.

W. M. W.—Clothe warmly in flannel, and sleep in flannel as well. Avoid chills. Diet to be generous, but not stimulating. Attend also strictly to digestion. If any severe or painful attack comes on, this must be treated by a physician. Your chief hope lies in

[Continued on page 176.]

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